

pr.09851 / 09853 Khabarovsk - KHABAROVSK

DATA FOR 2023 (standard update)

pr.09851 / OKR "Kalitka-SMP" - KHABAROVSK

"Khabarovsk"

pr.09853

★★★★

Large special-purpose nuclear submarine / strategic nuclear submarine cruiser ([source](#)) / carrier of robotic underwater vehicles. The developer of the submarine is the Central Design Bureau of Marine Engineering "Rubin" ([source](#)). The submarine will be the first full-fledged carrier of the new weapons system ("Status-6" / 2M39 "Poseidon"), the prototypes of which were tested on the experimental submarine of project 20120 "Sarov". In the mid-2010s, there were also discussions about the assumptions that this submarine is a long-range hydroacoustic patrol boat or even a nuclear deep-sea station, but these hypotheses were erroneous.

Probably, on 19.06.2012, State Contract No. 66-12 was signed for the supply of submarines of project 09851 to the Fleet ([source](#)). Contract No. 120-14 dated 03.06.2014 was concluded between JSC PO Sevmash and JSC Central Design Bureau MT Rubin for the implementation of a component of the R&D project Kalitka-SMP for the construction of the submarine Project 09851 ([source](#)). Later in 2016, it was reported that work on Project 09851 was being carried out in accordance with technical specifications No. BLITZ.360029.608TZ, code SC R&D project GTS-K ([source](#)). In 2017, for the first time in domestic nuclear submarine construction, Sevmash Design Bureau designers created a complete 3D model of the ship's hull during the construction of a submarine. The submarine Khabarovsk served as a pilot project. It is being created as a carrier of robotic naval assets, which are intended for exploration of the seabed and subsoil of the World Ocean, monitoring the continental shelf, and protecting and covering the use of naval forces. In addition, the plant's designers have developed and implemented programs that are used to issue the plaza documentation for the construction of this ship. As Sevmash Chief Designer Yuri Spiridonov explains, the use of modern technologies has improved the quality and significantly reduced the duration and labor intensity of the work ([source](#)).

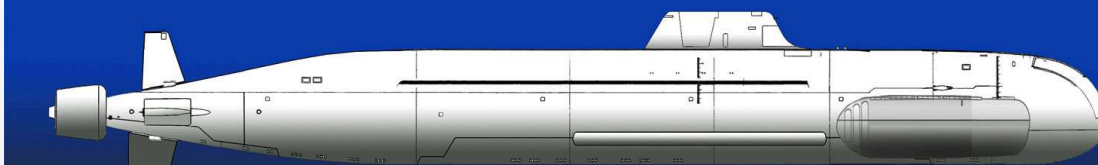
The keel of the lead submarine Khabarovsk took place on July 27, 2014, in workshop No. 50 of PO Sevmash (Severodvinsk). On May 25, 2018, the media reported that the submarine's pressure hull elements had passed hydraulic tests ([source](#)). According to plans from 2016, the construction of the submarine was supposed to be completed by 2020 ([source](#)). In mid-2019, information appeared about plans to launch the submarine by the end of 2019 ([source](#)). On 20.04.2020, the media reported on plans to launch the Khabarovsk submarine in May-June 2020 and plans to conduct tests of the submarine over the course of two years ([source](#)). Later, on 24.08.2020, at the Army-2020 forum, Mikhail Budnichenko, General Director of PO Sevmash, [stated](#), that the launch of the Khabarovsk in 2020 was not planned at all. On November 7, 2020, it was reported that the Khabarovsk submarine is planned to be removed from the workshop and launched in the first half of 2021 ([source](#)). At the same time, PO Sevmash reported only on the construction of the Khabarovsk submarine in both 2020 and 2021, and, accordingly, the submarine was not launched from the slipway in 2021 or 2022. As of early 2023, it is expected that the submarine will be launched in 2023 - there is no official confirmation of this yet.

In 2016, it was reported that the Rubin Central Design Bureau of Marine Engineering plans to carry out R&D work on the design and construction support of the order of project 09853 at PO Sevmash ([source](#)). It can be assumed that Project 09851 is the lead boat of a series of specialized submarine carriers of the 2M39 complex, and the Project 09853 boats, which are planned to be built in series, are serial submarine carriers.

On January 15, 2021, information appeared in the media about the construction of the Ulyanovsk nuclear-powered submarine according to Project 09853 with delivery to the Fleet by 2027. The information is not true and all information with dates and plans in the message refers to the Ulyanovsk nuclear-powered submarine of Project 885M.

http://militaryrussia.ru (c) 11.11.2020

ПЛАН пр.09851 "Хабаровск" (образ 2018-2020 г.г.)



Presumed appearance of the submarine pr.09851 "Khabarovsk" (MilitaryRussia.ru, 2020)

Author: DIMMI

Created: 29.07.2014 23:33:17

Comments: 29

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pr.941 Shark - TYPHOON

DATA FOR 2023 (standard update)

pr.941 "Akula" - TYPHOON

TK-208 "Dmitry Donskoy"

TK-202

TK-12 "Simbirsk"

TK-13

TK-17 "Arkhangelsk"

TK-20 "Severstal"

TK-210

★★★★

Nuclear-powered ballistic missile submarine (SSBN) / cruiser submarine (until 25.07.1977) / heavy strategic missile submarine (heavy SSBN since 03.06.1996). The project developer is the Rubin Central Design Bureau for Marine Engineering, the chief designer is S.N. Kovalev, the chief observer for the Navy is V.N. Levashov. Preliminary development of the D-19 missile system began at the Miass SKB-385 in early 1971. The tactical and technical specifications for the design of the SSBN were issued in December 1972. The construction of a new series of SSBNs was planned as a response to the construction of a series of Ohio-class missile carriers in the United States. The Resolution of the USSR Council of Ministers on the design and construction of Project 941 was adopted on December 19, 1973. It was probably planned to build a series of 12 SSBNs of the project - this figure was named by the Commander-in-Chief of the USSR Navy S.G. Gorshkov in a speech to students and teachers of the Naval Training Center No. 93 in Paldiski in the summer of 1975.

The lead submarine of the series TK-208 was laid down at PO Sevmash (Severodvinsk) on June 17, 1976. Launched on September 23, 1980 and accepted by the USSR Navy on December 12, 1981. Construction of the submarine series was completed with the delivery of SSBN TK-20 to the Navy on September

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- EARTH
- WATER

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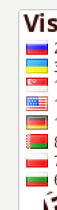
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4, 1989. A total of 6 SSBNs of the project were built, the seventh boat of the project - TK-210 - was laid down in 1986, but in 1988, with 40% readiness, construction was stopped, and in 1990 the stock was dismantled for metal. Partial assembly and metal preparations were carried out in the 1980s for three more SSBNs of the series. That is, as of the early to mid-1980s, it was planned to build a series of 10 SSBNs, which was later reduced to 6 units.



SSBN TK-208 "Dmitry Donskoy" pr.941U, 2000s (<http://forums.airbase.ru>).

Author: [DIMMI](#)

Created: 29,09,2011 20:35:23

Comments: 66

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pr.09787 - DELTA-IV STRETCH

DATA FOR 2021 (standard update)

pr.09787 - DELTA-IV STRETCH

BS-64 "Podmoskovie" / pr.1083KM complex

★★★★



Special-purpose nuclear submarine (SPNS) / research submarine (RPS). The submarine-carrier of deep-sea nuclear power plants (DSP) was developed on the basis of the SSBN of Project 667BDRM by the Central Design Bureau of Marine Engineering "Rubin" by order of the Main Directorate of Marine Engineering of the Ministry of Defense of the Russian Federation. In 1999, the SSBN K-64 of Project 667BDRM - DELTA-IV (plant No. 381 / 07381, laid down on 18.12.1982 at PO "Sevmash") was delivered to the wall of the CS "Zvezdochka" (Severodvinsk) for further repairs with alteration according to Project 09787.

On February 26, 2004, the Rubin Central Design Bureau for Marine Engineering signed contract No. 52-04 for the development of the Grunt-1 design project, presumably to create an equipment complex for the submarine Project 09787 ([source](#)). In the same year of 2004, within the framework of the federal target program "World Ocean", the subprogram "Creation of technologies for the development of resources and spaces of the World Ocean" was adopted, within the framework of which design and engineering solutions were developed for the use of a research submarine (RIS) in the interests of shelf development (work with potentially hazardous underwater objects - PPOO, under-ice geological exploration, etc.). Work on the RIS was used in the development of the on-board research complex (KNIB) project of order No. 381 (SSN Project 09787) and in the work that had begun on preparing a draft resolution of the Government of the Russian Federation on the use of RIS for commercial purposes ([source](#)).

On February 8, 2008, the Zvezdochka Design Bureau and the Rubin Central Design Bureau of Marine Engineering signed contract No. 178-07/600 for the release of working design documentation for project 09787, with a deadline of December 2013, and a contract amount of 348.6 million rubles ([source](#)). Contract No. 85-08/600 for technical support for the conversion of order No. 381 was signed on December 13, 2008, with a deadline of December 2015, and a contract amount of 443.7 million rubles ([source](#) , *Rubin Central Design Bureau of Marine Engineering, annual report for 2012*). As of 2012, the submarine is located in workshop No. 15 of the Zvezdochka Design Bureau with its missile compartment cut out; conversion work is underway on the boat. The estimated completion date is 2014-2015. In 2015, the conclusion of the Scientific and Technical Center "Rumb", JSC "USC", and the Ministry of Industry and Trade of the Russian Federation on the price level for the submarine conversion was received for order No. 381 "Podmoskovie". The conclusion was sent to the Ministry of Defense of Russia to revise the contract price (source - Annual Report of the CS "Zvezdochka" for 2015).

On August 11, 2015, the BS-64 "Podmoskovie" submarine was withdrawn from the slipway of the CS "Zvezdochka". The transfer of the submarine to the Fleet was expected at the end of 2015, but in 2015 the delivery of the submarine to the Fleet is scheduled for 2016 (source - Annual Report of the CS "Zvezdochka" for 2015). On October 22, 2016, the BS-64 Podmoskovie nuclear submarine left Severodvinsk for the first stage of sea trials in the White Sea ([source](#)). After sea and state (November-December 2016) tests, the submarine was transferred to the Fleet on December 26, 2016, and after the transfer to the Fleet, the boat will probably join the 29th separate submarine brigade of the Northern Fleet (Olenya Bay).

In December 2017, tests of the modernized deep-water complex of Project 1083KM were conducted, presumably with the carrier submarine of Project 09787 BS-64 "Podmoskovie" ([source](#)).

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Return of the submarine project 09787 BS-64 "Podmoskovie" from the first sea trials, Severodvinsk, 11/12/2016 (<http://zvezdochka-ru.livejournal.com/>).

Author: [DIMMI](#)

Created: 06.09.2013 01:17:43

Comments: [19](#)

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pr.971 - AKULA

DATA FOR 2021 (standard update)

pr.971 / 09710 "Bars" / "Pike-B" - AKULA

Project 971, Project 971I / 09719 "Irbis" - Improved AKULA

Project 971 / Project 971U - AKULA-II

Project 971 / Project 971M (K-335) - AKULA-III

Project 971M - AKULA-IV

★★★★



Multipurpose nuclear submarine. Development of the Project 971 SSN was started by SKB-143 "Malakhit" (Leningrad, Chief Designer Georgy Nikolaevich Chernyshov, since August 1976, after 1997 - Yu.I. Farafontov) according to the 1972 technical specifications "development of a large nuclear multipurpose submarine of the 3rd generation" as an analogue of the Project 945 SSN with the replacement of titanium alloys with steel in the design. The design uses the developments of the low-noise SSNs of Projects 991 and 958. A brief outline design (preliminary design) was developed by the beginning of 1976. The Krylov Central Research Institute took part in the development of the technical design, work on which was started by a joint decision of the Navy and the Navy on July 27, 1976 (especially in terms of reducing the noise level of the SSN). The chief designer's group was formed in August 1976.

Since 1968, the Krasnoye Sormovo plant began assembling the shore prototype of the project 971 submarine power compartments - the KV-1 test rig - at NITI. Since 1972, work on the prototype construction was continued by LAO. The construction of the unit was completed on December 25, 1975, and the final commissioning, due to a number of faults discovered during hot tests, occurred on December 24, 1976. The automatic control system for the power plant was assembled by representatives of NPO Aurora (*history* - Shumakov).

Design : the technical design of the submarine was developed from September 1976 to May 1977. One of the main tasks facing the developers was to keep the submarine within the displacement declared in the draft design. The technical design was reviewed by the 1st Central Research Institute of the USSR Ministry of Defense (shipbuilding) in June 1977 and approved on September 13, 1977, with the reservations that during the development of drawings and construction it was necessary to ensure an even greater reduction in noise, the placement of SGPD launchers, and the placement of CRBDs with the possibility of use against coastal targets. After receiving information about the innovations on the American Los Angeles-class SSN, which resulted in the installation of a sonar with digital signal processing, reducing the impact of the SSN's own noise, and also taking into account the wishes of the Navy leadership to equip the SSN with the Granat CRBD (Resolution of the USSR Council of Ministers dated May 26, 1978), the design was additionally revised to install the Skat-3 sonar, which required a change in the hull design. The project was delivered in 1980.



PLA Chakra / K-152 "Nerpa" pr.9711 - Improved AKULA on the way to India, end of March 2012 (<http://www.militaryphotos.net>).

Author: [DIMMI](#)

Created: 06.10.2009 19:44:50

Comments: [60](#)

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pr.1910 - UNIFORM

DATA FOR 2020 (standard update)

pr.1910 / pr.19100 "Kashalot" - UNIFORM

AC-13

AC-15

AC-33



Nuclear deep-sea station of the 1st rank / special nuclear submarine / deep-sea technical facility. The design of nuclear deep-sea stations for performing special tasks on the bottom of the World Ocean was started by the Resolution of the Council of Ministers of the USSR of 1972 on the creation of an autonomous nuclear deep-sea station (AGS) of project 1910 "Yauza" (later replaced by "Kashalot") and a complex of project [1851](#). The main contractor for the projects was determined to be the Central Design Bureau "Volna" of the USSR Ministry of Shipbuilding Industry. For project 1910, the chief designer is E.S. Korsukov, deputy - S.M. Bavin. Later, by order of the Minister of Shipbuilding Industry, a special design group was created under the leadership of Yuri Mikhailovich Konovalov to design the AGS of project 1910. In 1974, SPMB Mashinostroeniya and TsPB Volna were merged into SPMBM Malakhit, which was tasked with maintaining the autonomous AGS of Project 1910 and the complexes of [Project 1851](#) and later [Project 1083](#). Specialists from the Academician Krylov Central Research Institute, TsNIIKM Prometey (structural materials), TsNIITS, TsNIISET, LPO Elektrosila and others took part in the development of the AGS.

In 1972, the Leningrad Admiralty Association (Leningrad) began preparations for the construction of AGS of Projects 1851 and 1910. In August 1976, the first section of the lead order of Project 01401 was manufactured in Shop No. 9. The official laying of the AGS was on 20.11.1977. In 1978, the formation of the hull of the order was completed and hydraulic tests were performed. In the fall of 1982, the AGS was launched (25.11.1982) and 6 months later the first tests of the nuclear power plant were conducted on the boat (May 1983). In the fall of 1983, the AGS was sent to continue testing at the LAO acceptance base in Severodvinsk. The experience gained during the creation and testing of the lead AGS of Project 1910 was used in the creation of the AGS of Project [1851](#). The lead AGS of the project was accepted by the Navy for trial operation on 31.12.1986. Construction of the series of three boats was completed on 16.12.1994 with the transfer of the third boat to the Navy. All Project 1910 submarines served or are serving in the Northern Fleet as part of the 29th separate submarine brigade of the Navy in Olenya Bay.

In October 1976, in accordance with the Order of the Commander-in-Chief of the USSR Navy, a detachment of hydronauts was formed to operate deep-sea stations, modeled on the cosmonaut detachment. Candidates for the detachment had to: serve on a submarine of the USSR Navy for at least 5 years, be a member of the CPSU and pass a medical commission on the requirements that cosmonauts had to meet. The formation of the detachment began on the territory of the 39th brigade of submarines under construction on Rimsky-Korsakov Street in Leningrad. The first officer of the detachment was Platon Aleksandrovich Chebotayev, who formed the detachment and was appointed deputy commander of the detachment. Later, the detachment was given a small town on the Shkipersky Channel, where physicists had previously studied the effects of nuclear radiation on living organisms. The detachment existed there until 1992. In the summer of 1977, 23 officers of the USSR Navy were recruited for training at the 15th Central Scientific Research Institute, from which two crews of the experimental AS-13 AGS (Project 1910) were to be formed. The recruited officers formed the 6th department of the 15th Central Scientific Research Institute, which organizationally reported to the head of the 5th department, Captain 1st Rank E.M. Mazulnikov. In 1979, the 29th separate submarine brigade of the Northern Fleet began to form in Olenya Bay for the basic maintenance of AGS and the operation of their carriers in the Northern Fleet. In 1980, the first hydronauts of the detachment began operating the towed complex "Seliger" ([source](#) , [source](#)).



Nuclear deep-sea station AC-33 pr.1910 - UNIFORM. Presumably 1990s (photo - US NAVY, <http://www.dodmedia.osd.mil/>).

Author: [DIMMI](#)

Created: 01.05.2010 09:27:38

Comments: [79](#)

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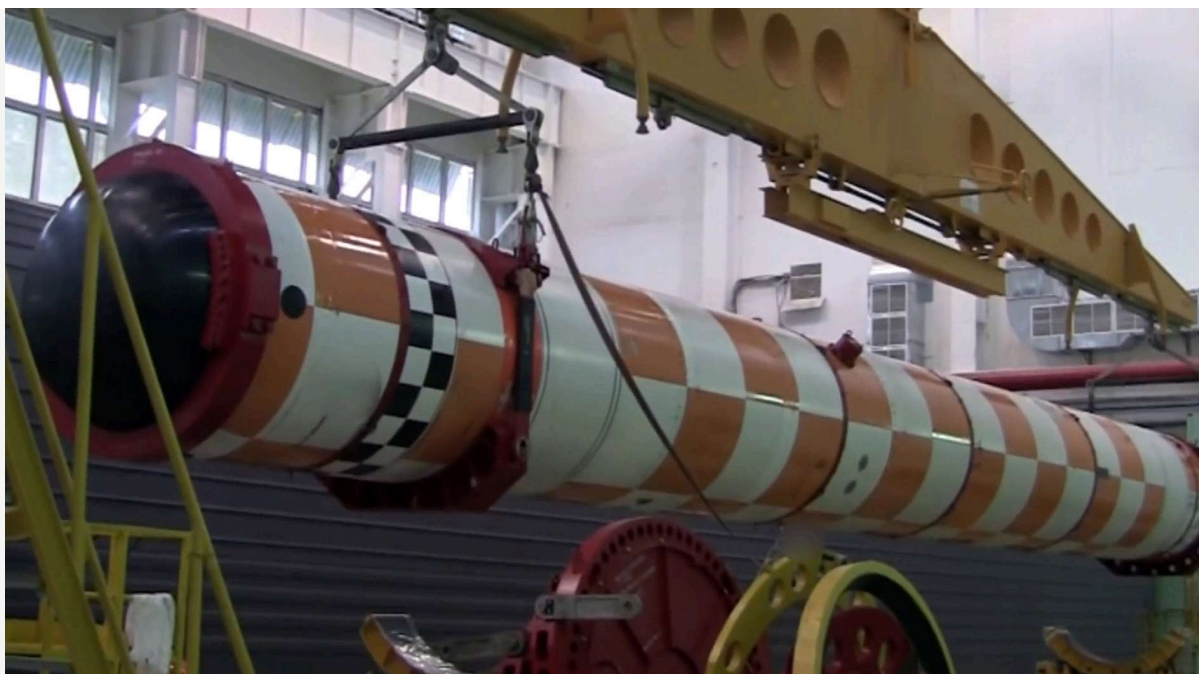
Complex 2M39 Poseidon / OKR Skif - KANYON

DATA AS OF 2020 (standard replenishment)

2M39 Poseidon Complex / Skif R&D Project - KANYON

Self-propelled underwater vehicle / unmanned underwater vehicle / boat-based robotic underwater vehicle / marine robotic complex (MRTC). The development of the naval strategic weapons system on the topic of the Skif R&D Project was and is being carried out under the general management of the Rubin Central Design Bureau for Marine Engineering (St. Petersburg). The developer of the launch complex is the Makeyev State Research Center (Miass). The initial work on the Spilit R&D project was successfully completed by Department No. 118 of the Makeyev State Research Center together with the Rubin Submarine Shipbuilding Design Bureau in Leningrad in 1988-1990. Following a competition in the early 1990s, the GRC began full-scale development of the Skif R&D project (2M39 underwater weapon system) under contract No. 334-92 dated June 5, 1992 with the Russian Ministry of Defense ([source](#)). In the late 1990s, the GRC, at the suggestion of the Rubin Central Design Bureau of Marine Engineering, was to become the lead organization for the creation of both the Skif product and the system, but this suggestion was not approved and the Rubin Central Design Bureau of Marine Engineering (probably) became the lead design bureau. The chief designer of the direction at the Makeyev GRC is A.P. Shalnev. The release of design documentation for the system began in 2005 (and was probably completed in 2008). Presumably, the production of experimental prototypes for the Skif R&D project began at the same time. In 2007-2009. In the Makeyev State Research Center, tests of units and assemblies are carried out on a vacuum-dynamic test bench as part of the R&D project. In 2008, strength tests of units, tests in a rig simulating hydrodynamic loads, and functional tests were carried out. The first successful tests of prototypes of the product as part of the Skif R&D project were carried out by launching a mock-up of the product in October 2008. Tests of mock-ups of prototype products are carried out from the experimental submarine B-90 Sarov, [project 20120](#), with the involvement of the rescue vessel Zvezdochka, [project 20180](#), with a special barge of the floating test complex (PIC), [project 20210](#). Also, methods for searching for and lifting payload mock-ups to the surface are being developed using the PIC and the rescue vessel Zvezdochka without the involvement of the submarine B-90 Sarov - by immersing the prototype product and throw-away mock-ups, followed by launching from an underwater position without the standard launch of their launcher. In January-October 2015, on the experimental submarine B-90 "Sarov" [project 20120](#) with the participation of the FTsDT "Soyuz" test launches of the product 3P27 with the replacement of the mass of the product on the submarine were carried out ([source](#)). Presumably, we are talking about the prototype of the product 2M39 for testing with the submarine "Sarov". According to Western estimates, several more years will pass from the testing of the prototype to the combat model of the KANYON system (2015, [source](#)). Our forecast is that the testing of the 2M39 system may last until 2025 and even longer. ★★★★★

The material uses data only from open public sources. Identification of the ROC "Skif" and the unmanned underwater vehicle known in the West as KANYON is presumptive based on information from open sources: [source1](#), [source2](#). Identification of the index 2M39 according to [source3](#).



The 2M39 Poseidon unmanned underwater vehicle or its model being unloaded from a 2F39ZhST-01 transport car during testing at a testing site. Still from a video by the Russian Ministry of Defense published on 20.02.2019.

Author: [DIMMI](#)

Created: 23.05.2013 00:01:09

Comments: [121](#)

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pr.777A "Kalina"

DATA FOR 2020 (in progress)

R&D "Kalina-VMF"

pr.777A "Kalina"



A project for a 5th generation non-nuclear submarine. The project is being developed by the Rubin Central Design Bureau. On March 18, 2013, the media reported that the Rubin Central Design Bureau had begun research and development work to determine the appearance of a new (fifth) generation non-nuclear submarine. On April 24, 2013, it was reported that the design of the submarine had begun - apparently, this was all about work on the preliminary design of the submarine. On November 5, 2013, the Admiralty Shipyards newspaper reported the name of the 5th generation non-nuclear submarine project - Kalina. On February 19, 2014, Vice-Admiral Alexander Fedotenkov stated that preparatory work was underway to design the submarine - apparently, this is the name of the research and development work ([source](#)). In fact, the Kalina-VMF R&D work was completed in December 2014 - as a result of the research work, a preliminary design for a multi-purpose non-nuclear submarine with two propulsion options - traditional and air-independent (AIP, [source](#) - *USC. Annual*) was prepared.

According to USC's annual report for 2014, experimental and design work (R&D) on the creation of a new non-nuclear submarine was planned to begin in 2015. In an interview on 21.01.2016, Navy Commander-in-Chief Viktor Chirkov said that the design of the Kalina non-nuclear submarine was already underway. In 2019, design work on the submarine continues ([source](#)).

Serial production of non-nuclear submarines of the 5th generation is planned to begin no earlier than 2020 (statement by Russian Navy Commander-in-Chief Viktor Chirkov, 2013). In 2016, it was announced that construction of the lead submarine of the project could begin earlier - in 2018 at the Admiralty Shipyards ([source](#)). At the same time, on October 16, 2018, a USC representative stated in the media that construction of the submarine had not yet begun due to the lack of an order from the Russian Ministry of Defense ([source](#)).

On October 20, 2020, the submarine project number was named in the media for the first time - "777A Kalina" ([source](#)).



Model of the non-nuclear submarine project 677E "Amur-1650", which probably served as the starting point for the project 777A "Kalina" (ARMY-2015 Forum, photo by A.V. Karpenko, [source](#)).

Author: [DIMMI](#)

Created: 20.03.2013 23:54:29

Comments: [15](#)[READ THE FULL ARTICLE >](#)

Husky (SPMBM Malakhit project)

DATA FOR 2019 (standard update)**"Husky" (project)**

A project for a 5th-generation multipurpose nuclear-powered submarine with cruise missiles (SSGN). The 5th-generation SSN is being developed by the Malakhit Design Bureau, as first reported in the media on 16.12.2014. It was also reported that the development was being carried out by the design bureau on its own initiative, without a technical assignment from the Russian Ministry of Defense. On 17 March 2016, the media reported the name of the project - "Husky". The first statements by the Malakhit Design Bureau's management regarding the 5th-generation SSN were recorded in the media on 09.02.2014 ([source](#)).

On 07 July 2015, it was reported (media, 07.07.2015, [source](#)) that the SSN is being designed by the Malakhit Design Bureau on one basic platform in two versions:

- a multipurpose SSN aimed at countering enemy SSNs;
- an anti-aircraft carrier SSN;

On August 8, 2016, [it was reported](#) that a contract was signed between the Malakhit Scientific Research Institute and the Russian Ministry of Defense for the development of the submarine. Apparently, this concerns research and development work on the design of the future submarine, and the technical design of the submarine will begin after 2020. In the first half of 2018, the Malakhit Scientific Research Institute successfully defended the first stage of the submarine design - the preliminary design - to the customer ([source](#)). In May 2018, it was reported that the research and development work carried out on the design of this submarine was "recognized as unsatisfactory" by the customer, since it "does not meet the customer's requirements." But at the same time, it was later reported that in the first half of 2018, the Malakhit Scientific Research Institute successfully defended the first stage of the submarine design - the preliminary design - to the customer ([source](#)).

The construction of the new submarine is planned to begin at PO Sevmash before 2020 (media, 28.07.2015, [source](#)). Later, plans were reported to build the Husky submarine after 2023. The Husky submarine is included in the shipbuilding program for 2018-2027.

There is no other information.



Hypothetical appearance of the Husky class submarine (MilitaryRussia.Ru, 01.05.2018).

Author: [DIMMI](#)

Created: 17.03.2016 21:31:29

Comments: [3](#)[READ THE FULL ARTICLE >](#)

pr.641B - TANGO

DATA FOR 2012 (standard replenishment)**pr.641B "Som" - TANGO**

Large (ocean-going) diesel-electric submarine (type "B"). The new project of a large boat was developed on the basis of the submarine of project [641](#) by the Central Design Bureau of Marine Engineering "Rubin". Chief Designer - Z.A.Deribin, later - Yu.N.Kormilitsyn. Construction of a series of boats was carried out at Plant No. 112 "Krasnoye Sormovo" (Gorky) in the period from 1971 (the lead submarine B-443 was laid down on September 17, 1971, launched on September 2, 1972, accepted by the Navy on December 30, 1972) to 1982. A total of 18 submarines were built. The delivery of the boats to the Fleet took place at the finishing base of the plant in Sevastopol. Submarines of project 641B were part of the Black Sea (B-380), Northern and Baltic fleets.

Submarine pr.641B - TANGO (<http://militaryphotos.net>).Author: [DIMMI](#)

Created: 15.06.2009 12:59:38

Comments: [33](#)[READ THE FULL ARTICLE >](#)

Harpsichord-2R-PM

DATA AS OF 2016 (in progress)

"Klavesin-2R-PM"

Autonomous unmanned underwater vehicle. The vehicle is being developed by the Rubin Central Design Bureau for Marine Engineering (St. Petersburg) under government contract No. 748/31/664PM-2009/27-09 dated 19.05.2009, concluded with the Ministry of Defense of the Russian Federation ([source](#)). Testing of the Klavesin-2R-PM UUV began in 2016. As of the end of September 2016, the vehicle has passed pool tests, paired equipment tests, and is undergoing tests in the Black Sea. Completion of the tests is planned for 2017 ([source](#)). The Klavesin-2R type AUVs are being developed by the Rubin Central Design Bureau of Marine Technology together with the Institute of Marine Technology Problems of the Far Eastern Branch of the Russian Academy of Sciences (IPMT FEB RAS, Vladivostok), and are a further development of the Klavesin-1R AUV developed by the said institute. According to previously published information, the Klavesin-2R AUV will be part of the equipment complex of the Project 09852 BS-139 Belgorod and Project 09787 BS-64

Podmoskovie PLASN ([source](#)). **The purpose of the apparatus** : search operations and studies of the seabed. ★★



Unmanned underwater vehicle "Klavesin-2R-PM" (<http://ckb-rubin.ru/>).

Author: [DIMMI](#)

Created: 29.09.2016 15:55:22

Comments: [1](#)

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5th generation submarine (project of TsKB MT Rubin)

DATA FOR 2016 (standard update)

5th generation submarine (project)



Nuclear attack submarine of the 5th generation. On March 18, 2013, the media reported that the Rubin Central Design Bureau of Marine Engineering had begun R&D to determine the appearance of a nuclear submarine of the new (fifth) generation. The head of the submarine development group is Sergey Sukhanov (media, November 12, 2013, [source](#)). It can also be assumed that the Malakhit Scientific and Design Bureau of Marine Engineering will offer its own project of an autonomous attack submarine, which was later confirmed (see the [Husky](#) project). On June 20, 2015, representatives of the Rubin Central Design Bureau of Marine Engineering confirmed that work on the initial design of the submarine was underway (media, June 20, 2016, [source](#)).

There is no other information yet.

Author: [DIMMI](#)

Created: 20.03.2013 23:58:02

Comments: [10](#)

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pr.21310 Triton-NN

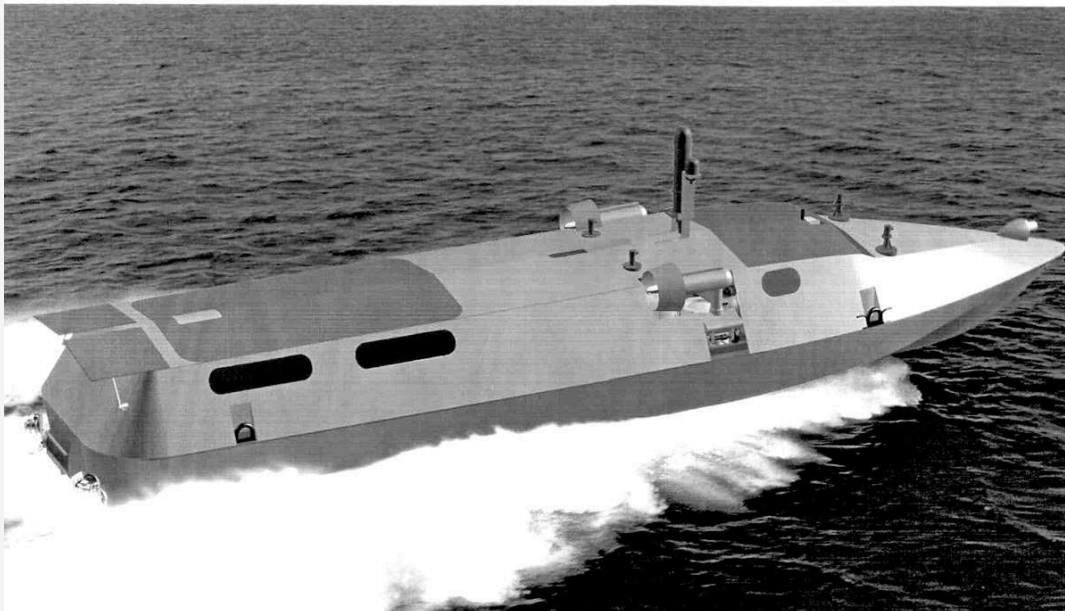
DATA FOR 2014 (standard update)

Project 21310 "Triton-NN"



Submersible boat - carrier of divers. Developed by the Central Design Bureau "Lazurit" in 2001-2002, observers from the Russian Navy - Grebenchuk V.M., Kharitonov V.V., Ovchinnikov A.V., Berkov Yu.A. The development was carried out within the framework of the R&D "Triton-NN" and "Furnitura" (the second is possibly an independent product). Testing of the boat was planned for November 2008 in Parusnoye ([source](#) , [source](#)). As a result, in December 2008, state tests of the prototype submersible boat were conducted. According to the "Annual Report of the Central Design Bureau "Lazurit" for 2008, the project was prepared for serial production during the year.

The boat is capable of gliding on water, as well as moving underwater, and is intended primarily for carrying out sabotage operations with covert landing on the enemy shore ([source](#)).



Drawing of the submersible boat pr.21310 "Triton-NN", first published in 2003 (<http://otvaga2004.mybb.ru/>).

Author: [DIMMI](#)

Created: 11/15/2014 6:37:06 PM

Comments: [1](#)

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pr.633 ROMEO

DATA FOR 2014 (standard replenishment)

pr.633 ROMEO

★★★★



Medium diesel-electric submarine ("S"). R & D was conducted by TsKB-112 (chief designer Z.A. Deribin, later A.K. Nazarov and E.V. Krylov) in accordance with the USSR Council of Ministers Resolution No. 1454-808 of August 9, 1955. The draft design was completed in April 1955 in two versions: according to the Navy requirements (Project 633) and an improved "initiative" (Project I-633). The projects were reviewed in May 1955 and the draft design I-633 was selected for technical design. The technical design was completed and approved by Resolution of the USSR Council of Ministers No. 1117-580 on August 15, 1956. The lead submarine of the S-350 series (factory No. 331) was laid down at the Krasnoye Sormovo shipyard in Gorky (slipway No. 3) on October 22, 1957 and launched on May 30, 1958. Factory sea trials were conducted from October 22 to December 20, 1958. State trials were conducted from December 21, 1958 to August 31, 1959 in the Black Sea. The S-350 was accepted into the Navy on August 31, 1959 and transferred to the Northern Fleet to continue trials. According to the initial plans, it was planned to build a series of 560 boats, but only 20-22 units were built (according to various sources). The submarines of Project 633 were built up to and including 1961 (the last boat of the series was delivered to the Navy on December 31, 1961). In the second half of the 1960s and in the 1980s, most of the submarines of the series were transferred for export.



Submarine pr.633 ROMEO (photo from the archive of salar1933, <http://foto.rambler.ru>).

Author: [DIMMI](#)

Created: 08.06.2009 23:17:54

Comments: [36](#)

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Amur-1650VNEU - AMUR (project)

DATA FOR 2014 (standard update)



Amur-1650VNEU - AMUR (project)

Large non-nuclear submarine ("B") with an air-independent propulsion plant. The development of a family of export submarines based on the non-nuclear submarine of [Project 677](#) is being carried out by the Central Design Bureau of Marine Engineering "Rubin" (chief designer as of 2010 - Yu.N.Kormilitsyn). The development of the basic project ([Project 677](#)) began in 1987 - the boat was intended for the USSR Navy. After the collapse of the USSR in the mid-1990s, the development of the family of export submarines "Amur" began. According to the letter of the State Customs Committee of Russia No. 01-15 / 2317 dated 04.02.1998, the family of submarines "Amur" with a displacement of 200 to 2400 tons is included in the list of military products permitted for export.

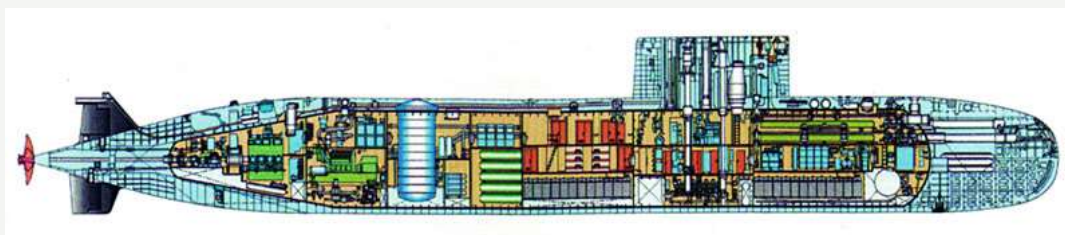
The lead boats of the series - [Project 677](#) "Lada" - B-585 (factory number 01570) and the lead boat [Project 677E](#) "Amur" (variant "Amur-1650") were laid down at the FSUE "Admiralty Shipyards" (St. Petersburg) on December 26, 1997. At the end of 2011, information appeared in the media that tests of the air-independent propulsion system (AIP) module were being conducted in Russia, which were planned to be completed in 2012. As of autumn 2012, the AIP was being developed by the Rubin Central Design Bureau for Marine Engineering - the developer has been allocated funding to create the system. Presumably, after the tests of the AIP module are completed, the submarine [Project 677E](#) "Amur-1650" or the third boat of [Project 677](#) - "Sevastopol" may be completed using it.

A prototype of the air-independent power plant developed by the Rubin Central Design Bureau for Marine Engineering will begin testing on the B-90 Sarov submarine by the end of 2012 (media report from 10/30/2012). This plant is a prototype of the VNEU for the Amur-1650VNEU submarine and, possibly, [Project 677](#). The VNEU runs on hydrogen fuel cells ([source](#)). On May 18, 2013, the Commander-in-Chief of the Russian Navy announced in the media that work on the first VNEU for the non-nuclear [Project 677](#) submarine is expected to be completed in 2015-2016, and the Navy will receive its first boat with such a VNEU in 2016-2017 ([source](#)). On September 23, 2013, it was announced that the completion date of the prototype VNEU was 2016 ([source](#)).

On August 28, 2014, the media, citing the leadership of the Russian Navy, reported that the Fleet would begin operating submarines with anaerobic power plants in 2017 ([source](#)).



Hull structures of the submarine "Amur-1650" project 677E on the embankment of the LAO, St. Petersburg, November 3, 2011 (photo by reflex-yu, <http://forums.airbase.ru>).



Drawing of the submarine project "Amur-1650" with air-neutral power plant, 1990s (<http://bastion-karpenko.narod.ru>).

Author: [DIMMI](#)

Created: 03.04.2012 23:58:02

Comments: [11](#)[READ THE FULL ARTICLE »](#)**pr.949AM - OSCAR-III****DATA FOR 2014 (in progress)****pr.949AM - OSCAR-II I**

K-132 "Irkutsk"

K-266 "Orel"



Nuclear submarine with anti-ship cruise missiles (SSGN). The development of the project was started by the Rubin Central Design Bureau of Marine Engineering no later than 2011. The technical project was created within the framework of the R&D project "Project 949AM" and approved by the decision of the Ministry of Defense dated 13.02.2012, additions to the technical project were made on 05.04.2013 ([source](#)).

In order to carry out the mid-life repairs of the [Project 949A](#) SSGN with modernization according to [Project 949AM](#), the technical re-equipment of the Far Eastern Shipyard "Zvezda" (Bolshoy Kamen) began in 2012.

On April 5, 2013, the State Contract for the modernization of the first [Project 949A](#) SSGN (plant No. 619) was signed between the Russian Ministry of Defense and the Far Eastern Shipyard "Zvezda". In May 2013, Zvezda Shipyard signed a contract with Rubin Central Design Bureau for the development of



working design documentation for the modernization of the lead SSGN and the creation and assignment of weapons and military equipment for the modernization of submarines of Project 949AM. The contract amount is 12.012 billion rubles. The contract period is until the end of November 2017, while the development and delivery of working design documentation must be completed by January 2016 ([source](#)).

The name OSCAR-III is provisional.



SSGN K-132 "Irkutsk" project 949A (photo from the archive of Rambo54, <http://militaryrussia.ru/forum>).

Author: [DIMMI](#)

Created: 08.12.2013 10:19:44

Comments: 2

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pr.20120 - SAROV

DATA FOR 2014 (standard update)

pr.20120 - SAROV

B-90 "Sarov"

★★★★



Experimental large diesel-electric submarine ("B"). The development of the preliminary design of the Sargan test boat was completed by the Rubin Central Design Bureau of Marine Engineering in March 1988. Chief Designer - A.V. Belov. In March 1989, the technical design was approved and the release of working drawings of the boat began. There is an assumption that the hull design was based on the submarine project [877B](#) . The only submarine of the Sargan project - B-90 (factory No. 137) - was laid down at the Krasnoye Sormovo shipyard (Nizhny Novgorod) on September 18, 1988 with a planned delivery date to the Fleet in 1993. Construction of the boat was stopped in 1998 with a readiness of 40%.

The decision to complete the experimental submarine at PO Sevmash was made in October 2001. The hull of the submarine Sargan was delivered for completion according to the modified (June 2003) project 20120 (chief designer A.P. Praselin) to workshop No. 42 of PO Sevmash in Severodvinsk in August 2003. The responsible person delivering the boat was B.N. Sorokin, the delivery mechanic was Yu.S. Melchakov. The keel board was reinstalled on the submarine on March 19, 2006 (2007 according to other sources). On May 26, 2007, by order No. 025 of the Commander-in-Chief of the Navy, the submarine was named Sarov. On December 14, 2007, the submarine was taken out of the assembly shop of PO Sevmash and launched on December 24, 2007 (in Severodvinsk). Mooring trials began on January 1, 2008. In July 2008, the submarine successfully passed factory sea and state trials and was accepted by the Russian Navy on August 7, 2008. It is based in the Northern Fleet (2009-2012 - Severodvinsk).



Experimental submarine pr.2120 B-90 "Sarov", photo version without retouching (photo - <http://sevmash.ru> , 2008).Author: [DIMMI](#)

Created: 01.07.2009 23:39:33

Comments: [124](#)[READ THE FULL ARTICLE >](#)pr.613 - WHISKEY

DATA FOR 2014 (standard update)

pr.613 WHISKEY-I (basic project with artillery armament)

Project 613 WHISKEY-II (basic design with a bow artillery machine gun)

Project 613 WHISKEY-III (basic design without artillery armament)

Project 613 WHISKEY-IV (basic design with aft artillery machine gun)

pr.613 WHISKEY-V (modernized basic design)

★★★★

pr.613 WHISKEY - status, export, sources

Medium diesel-electric submarine ("S"). The development of the boat was carried out on the basis of the project of the medium-displacement boat of pr.608 TsKB-18 (1942-1944), and also taking into account the study of technical documentation and samples of German submarines (sunk on July 30, 1944 in the Gulf of Finland and later raised by U-250 and captured boats of the XXI series). Also taken into account were the works on the SP-46 topic (TsKB-18, January-April 1946, study of the implementation of possible technical specifications for the submarine of pr.613). The boat project was developed in TsKB-18 (later renamed TsKBMT "Rubin"), chief designer - V.N.Peregudov, later - Ya.E.Evgrafov, since 1950 Z.A.Deribin. The tactical and technical assignment for Project 613 was approved in August 1946 based on proposals from TsKB-18 on the SP-46 project. The draft design was approved on October 20, 1947. The technical design was approved on August 15, 1948 by Resolution of the USSR Council of Ministers No. 3110-1258.

The submarine was the first in the USSR to be built using a flow-sectional method with extensive use of automatic welding with radiographic control of welds, and extensive unification of components and materials was used. Preparations for production at the Nikolaev and Gorky plants began in 1948. The lead submarines, S-80 (factory No. 801, Gorky, Krasnoye Sormovo) and S-61 (Nikolaev), were laid down on March 13, 1950 and April 11, 1950, respectively, and launched at 70% readiness on October 21, 1950 and July 22, 1950. S-61 underwent hydraulic tests at the plant on June 26, 1950. Submarine S-80 arrived at the plant's acceptance base in Baku on November 1, 1950 and underwent tests from December 31, 1950 to April 26, 1951. Deep-sea tests were completed on June 9, 1951. S-61 on November 6, 1950 g. capsized while leaving the dock, flooding several compartments. Mooring trials began on 12 January 1951 and 5 May 1951, respectively. Submarine S-61 moved to Sevastopol, where she underwent deep-sea trials (14 July 1951) and state acceptance trials from 17 October 1951 to 24 May 1952.

Both lead submarines were accepted into the Navy: S-80 on 2 December 1951 and S-61 (Captain A.F. Nadezhdin) on 24 May 1952. In 1953, supervision of production of submarines of Project 613 was transferred from TsKB-18 to SKB-112 (since 1955 TsKB-112, Chief Designer Z.A. Deribin), created at the Krasnoye Sormovo plant (Gorky). A total of 340 submarines of Project 613 were planned to be built, 215 submarines were built from 1950 to 1957 at plants in Gorky, Nikolayev, Leningrad and Komsomolsk-on-Amur. Submarines of Project 613 entered service with the Navy starting in 1952 and were in service until 1993 (at least the Black Sea Fleet, S-384), including as training submarines. By default, these are submarines of Project 613.

Submarine S-338 pr.613 WHISKEY-V. Naval parade on the Neva in Leningrad, July 1987 (<http://flot.com> , processed).Author: [DIMMI](#)

Created: 12.05.2009 17:15:25

Comments: [10](#)[READ THE FULL ARTICLE >](#)pr.1710 / 01710 Mackerel - BELUGA

DATA AS OF 2013 (standard replenishment)

project 1710 / 01710 "Mackerel" - BELUGA

CC-533

★★★★

Medium special (experimental) diesel-electric submarine ("SS"). Developed by SPMBM "Malakhit", chief designer G.P. Moskalov, scientific director of the submarine creation - V.M. Pashin (Krylov Research Institute). The submarine was created to study the behavior of a new hull shape in water, as well as for experiments with the injection of polymer solutions to reduce hydrodynamic resistance. The development of the submarine began in 1982. Submarine SS-533 (the only one built, factory No. 01620) was laid down at the Sudomek plant (Leningrad) on October 22, 1985, launched on October 5, 1986. The submarine was completed afloat in the waters of the former Novo-Admiralty Plant using the SPD-2M floating dock for work on the underwater part of the hull. Chief Builder - S.P. Zelensky, Person in Charge - V.M. Ilyin, Delivery Mechanic - Yu.K. Uchaev. Mooring trials of the submarine were held from October 14 to November 23, 1986. Factory sea trials were held in the Black Sea (Balaklava) from the end of 1986 to October 29, 1989 after the submarine was transported there by inland waterways.

The submarine was accepted by the Navy on December 19, 1987 (Black Sea Fleet). In 1992, experimental studies on the submarine were stopped. After several years of operation and experiments, the submarine was decommissioned from the fleet (2002) and disposed of (cut into scrap metal) in Sevastopol. The name of the submarine SS-533 - "Forel" - is also encountered - an erroneous one.

According to one version, work on the project of an experimental submarine-laboratory for studying flow processes was started in SKB-143 (now SPMBM "Malakhit") back in 1960. The technical project was developed in 1975. Construction on Project 1710 began only in 1985.



Submarine of the project 1710 SS-533 in the South Bay, Sevastopol, August 1996. In the background are two submarines of the project 690 BRAVO and submarine of the project 641 FOXTROT (photo by Ilya Kurganov, taken from <http://roteflotte.de>)



Experimental submarine SS-533 pr.1710 - BELUGA (<http://roteflotte.de>)



Experimental submarine SS-533 pr.1710 - BELUGA at the Sevastopol roadstead, 1995 (photo by A. Kuzenkov, <http://forum.sevastopol.info>).

Author: [DIMMI](#)

Created: 23.06.2009 00:13:50

Comments: [6](#)

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Archipelago / Seliger

DATA AS OF 2013 (standard replenishment)
Complex "Arkhipelag"
Complex "Seliger" with submarine-carrier pr.611P
★★★★



A towed underwater vehicle complex / research complex with an observation camera. The official version states that in order to detect American sonar cables located at the entrances to domestic naval bases, it was planned to create and test a complex of countermeasures. At a depth of up to 2,000 meters,

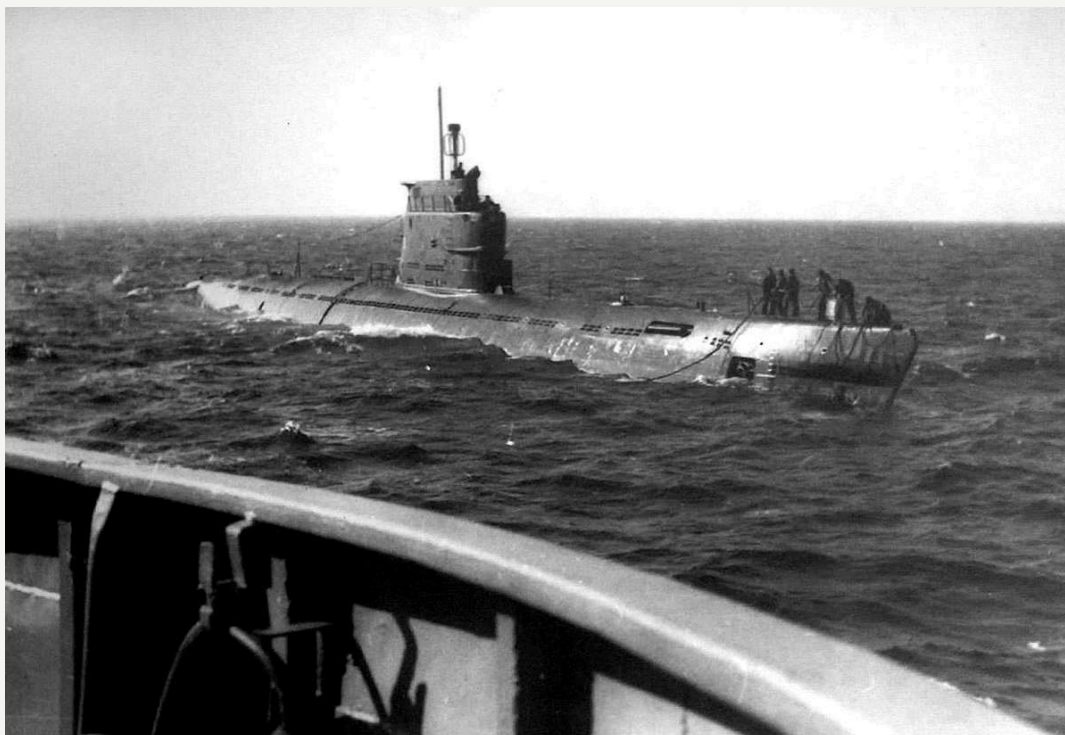
the cables were buried 40-50 centimeters into the ground, and at greater depths they simply lay on the bottom. During the threat period, it was planned to destroy the cables remotely from a ship or aircraft ([SOURCE](#)). Apparently, the complex of means included a submarine with means for detecting cables on the seabed and a deep-sea vehicle for precise identification and determination of cable coordinates.

For the needs of the Main Directorate for Deep-Sea Research (GUGI) of the USSR Navy, in the 1960s, the 170th Separate Design and Technology Bureau (former SKB-1 KMOLZ) developed a project for a complex with a towed vehicle with a large immersion depth. At the Kronstadt Marine Plant (KMOLZ), a prototype of the towed vehicle "Arkhipelag" was built with a surface carrier ship and with the crew transferring from the carrier to the vehicle through a hatch located in the upper part of the vehicle. During full-scale deep-sea tests without a crew in 1967, a depth of 2000 m was reached. With a crew, a depth of 1500 m was reached during ocean tests. Tests in the Baltic ended with the destruction of the vehicle "Arkhipelag" - during one of the surfacings, the entrance hatch was overwhelmed by a wave and the vehicle sank. In total, at least three autonomous descents were made ([source](#)).

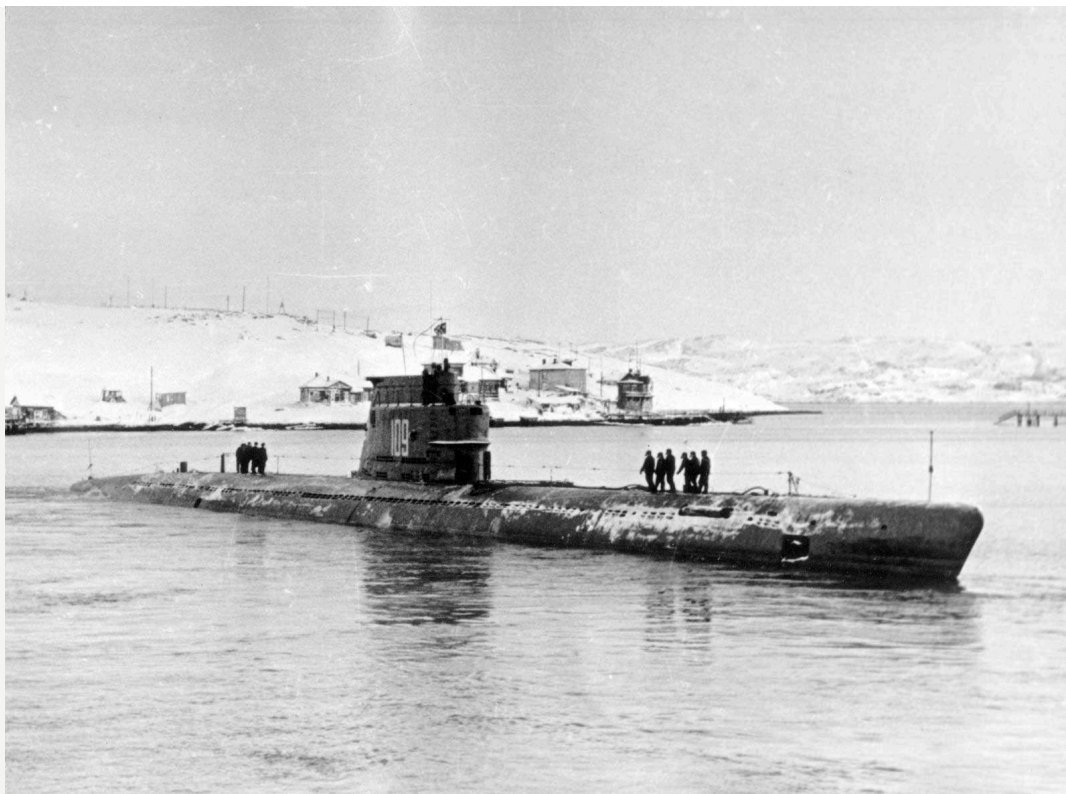
The serial towed vehicle "Seliger" was immediately designed with a carrier - a submarine and without a hatch in the upper part of the hull. A submarine was chosen as a carrier, among other things, in order to reduce the dependence of the apparatus on weather conditions. It was decided to use the submarine of [project 611 - ZULU](#) as a carrier. The technical design of the complex was completed by SKB-170 in 1967. A total of three apparatuses were built at the Kronstadt Marine Plant (KMOLZ) in 1970.



Models of towed vehicles "Seliger". OOO "Korvet", Severodvinsk, 2012 (<http://www.corvette-shipmodels.ru>).



The BS-69 carrier submarine on a voyage. The crew is working with a cable-rope. Possibly, the photo is from 1988 (photo from the Volk archive, <http://tsushima.su>).



Submarine of Project 611 ZULU-II, Northern Fleet (<http://militaryphotos.net>). According to the article by A.V. Burilichev "Deep-sea technical means" ([source](#)), the photo shows the submarine carrier of the underwater vehicles "Arkhipelag" and "Seliger" - BS-69 - either this is a mistake or the photo shows the B-69 submarine before it was equipped with a new sonar and re-equipped.

Author: [DIMMI](#)

Created: 23.11.2012 23:32:24

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pr.690 - BRAVO

DATA FOR 2013 (standard update)

pr.690 "Kefal" - BRAVO

C-368

C-226

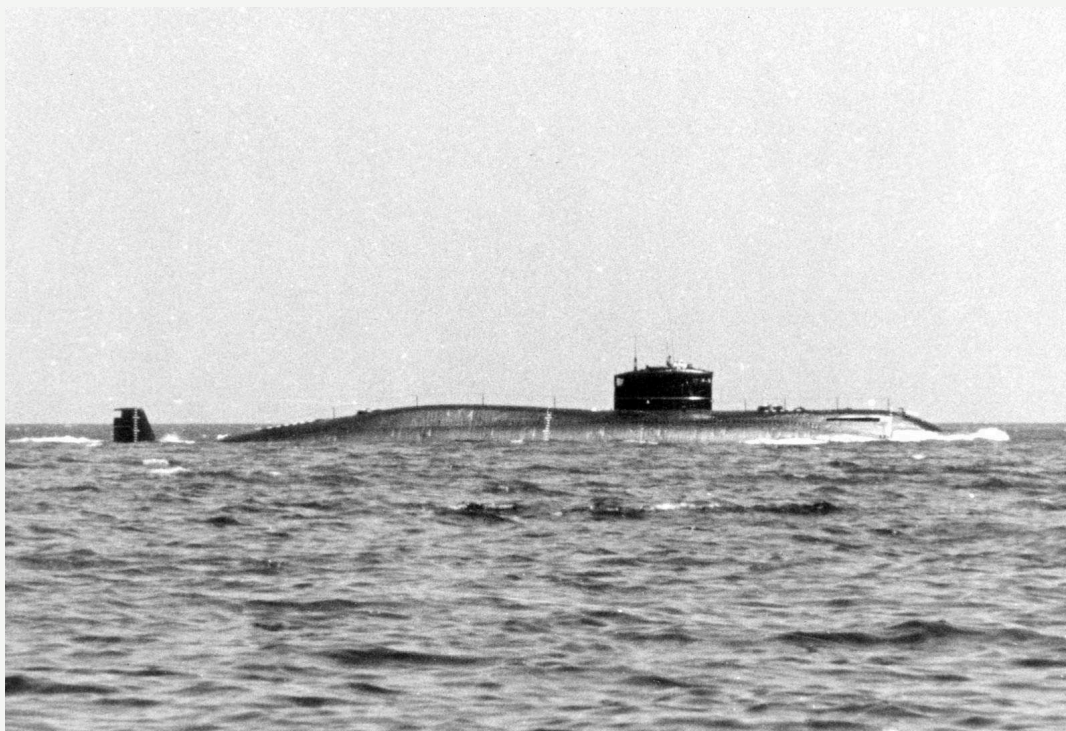
C-256

C-310

★★★★



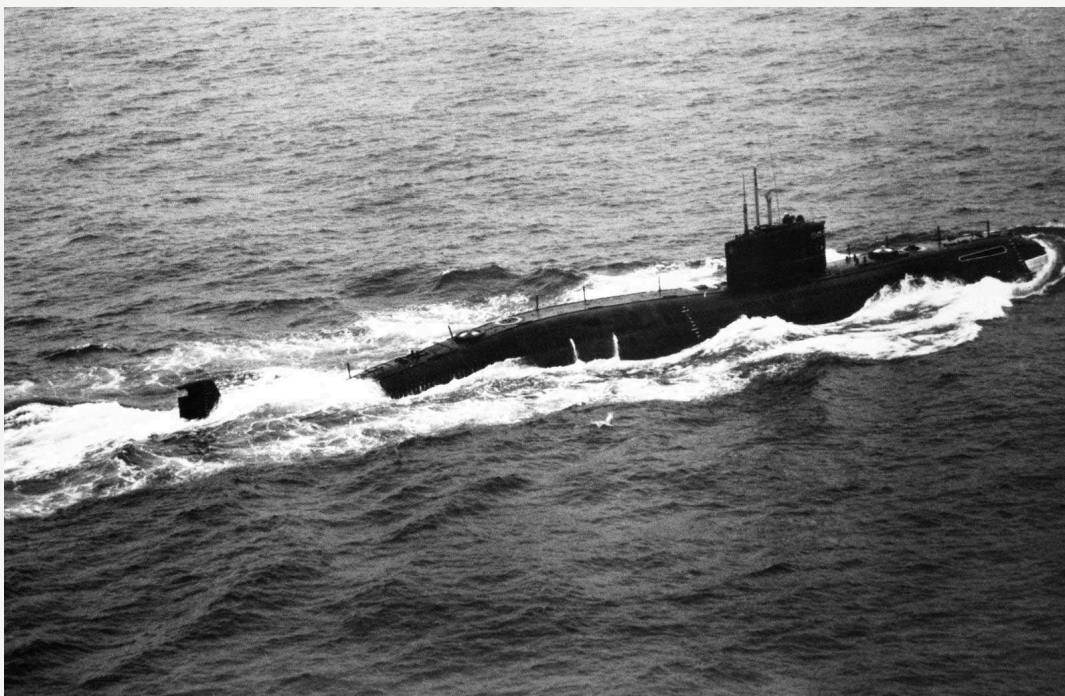
Medium diesel-electric target submarine ("S"). R & D was started by the decree of the USSR Council of Ministers dated February 28, 1963 at TsKB-112 (later renamed TsKB "Lazurit") jointly with the A.N. Krylov Central Research Institute and the 1st Central Research Institute of the Navy. Chief Designer E.V. Krylov. The main goal of creating the target submarine was to ensure testing of new anti-submarine weapon systems using a full-scale model of a potential enemy submarine in a real situation. The technical design was developed in 1963 without a preliminary design. The target submarines were built at Plant No. 199 "Leninskogo Komsomol" (Komsomolsk-on-Amur). The lead submarine of the project (S-368) was laid down on September 20, 1966, launched on September 3, 1967 and accepted by the Navy on December 31, 1967. In total, 4 submarines of Project 690 were delivered to the Navy in the period up to October 31, 1970.



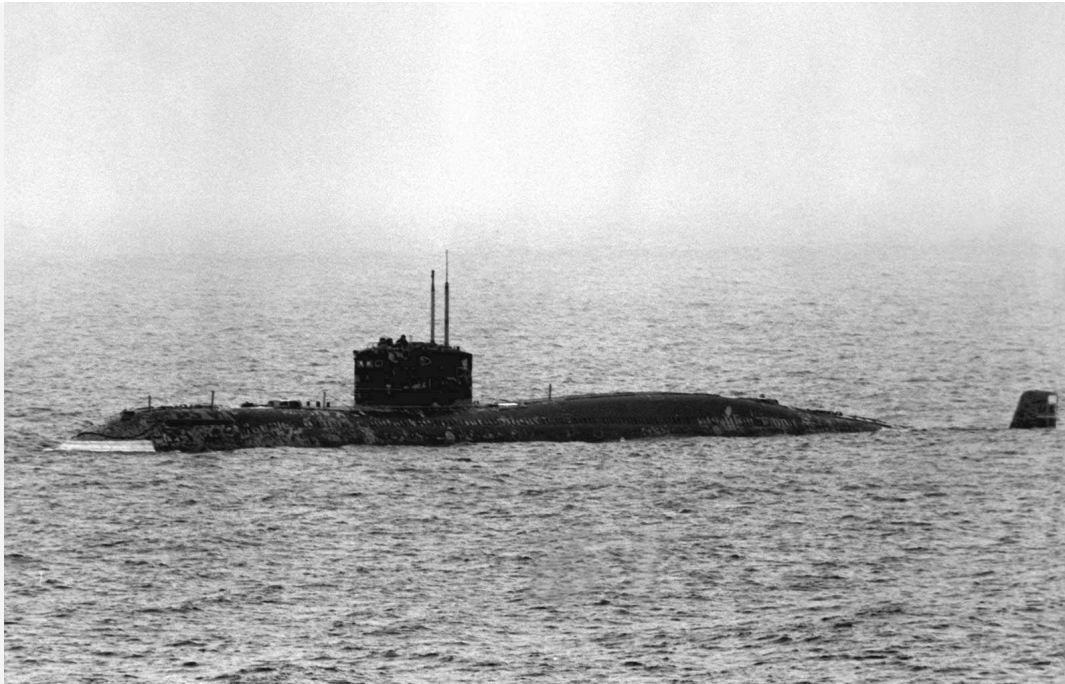
The S-310 target submarine, project 690 BRAVO, of the USSR Navy during testing (photo from the Volk archive, <http://tsushima.su>).



Target submarine pr.690 BRAVO of the USSR Navy, Sevastopol, 1974 (photo from murzik's archive, <http://forums.airbase.ru>).



Target submarine pr.690 BRAVO of the USSR Navy (photo US NAVY, 1983, <http://www.defenseimagery.mil>).



Target submarine pr.690 BRAVO of the USSR Navy (photo US NAVY, 1985, <http://www.defenseimagery.mil>).



Target submarine pr.690 BRAVO USSR Navy, 1980s - early 1990s (photo - G.G. Kisilev, <http://forums.airbase.ru>).



Target submarine S-310 pr.690 BRAVO of the Russian Navy, Black Sea Fleet, 1992 (photo from the archive of vas63, <http://tsushima.su>).

Author: [DIMMI](#)

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